UNITED STATES PATENT AND TRADEMARK OFFICE

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10/613,210	07/07/2003	Masahiko Mizutani	520.42914X00	4588

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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/613,210	MIZUTANI ET AL.
	Examiner	Art Unit
	WANDA Z. RUSSELL	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 August 2008*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

8/10/2008 has been entered.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   **Claims 1, 4-13, and 15** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Yonekura (Pub No. US 2002/0087730 A1), in view of Pyhalammi et

al. (Pub No. US 2008/0182559 A1) and Kolsky (Pub No. US 2003/0028599 A1).

Regarding **claim 1**, Yonekura discloses a content relay node (at 10a-Fig. 2)

having a function of routing data packets ([0035], lines 3-4), comprising:

a receiving unit (10, 10a-Fig. 1, and 10a-Fig. 2) having a plurality of input ports

(20a, 20a, 20a-Fig. 1, and Fig. 2);

a transmitting unit (10, 10a-Fig. 1, and 10a-Fig. 2) having a plurality of output

ports (20a, 20a, 20a-Fig. 1, and Fig. 2);

a data processing unit (10a-Fig. 2, and web content is processed, refer to [0045],

last 3 lines and lines 4-end);

a switch unit (10, 10a-Fig. 1 and 10a-Fig. 2) for connecting said receiving unit,

said transmitting unit, and said data processing unit (Fig. 2);

a plurality of storages (10a, 20a-Fig. 1, and [0048], lines 7-10) having a data

storing function; and

a routing control unit (10, 10a-Fig. 1, and 10a-Fig. 2) for controlling said

transmitting unit, and said switch unit (10a itself plays the functions of controlling

transmitting and switching),

wherein each of said data packets ([0035], line 6) includes a storage address of

the application layer for identifying (select a URL, [0039], 4th line from the end) said

plurality of storages on a network (web pages, refer to [0039], line 5) and a data

attribute (web pages such as C-HTML, HDML, WML, and the like, refer to [0039], lines

5-6),

wherein said receiving unit has means for (10a-Fig. 2) receiving a data packet

(s10-Fig. 2), means for (10a-Fig. 2) extracting the storage address and the data

attribute from the data packet (web pages such as C-HTML, HDML, WML, and the like,

are prepared, refer to [0039], lines 5-6), means for (10a-Fig. 2) transferring the data

attribute to said data processing unit (10a-Fig. 2 itself is a data processing unit) and the

storage address (web pages, refer to [0039], line 5) said routing control unit (10a-Fig.

2), and means for (10a-Fig. 2) sending the data packet to said switch unit (10a-Fig. 2

itself is a switch unit),

wherein said routing control unit has means for (10a-Fig. 2) selecting (select, [0039], 4th line from the end), as a destination of a received data packet, one of said transmitting unit and said data processing unit on the basis of routing information including the storage address and instructing said switch unit to make switching (s10-s14-Fig. 2, and [0039], last 6 lines),

wherein said storage has means for (10a-Fig. 2) storing ([0048], lines 7-10) the received data,

wherein said switch unit has means for (10a-Fig. 2) switching (request, [0035], line 9 and Fig. 2) a route according to an instruction from said routing control unit ([0035], lines 9-10),

wherein said data processing unit has means for (10a-Fig. 2) storing ([0048], lines 7-10) or transmitting (s2-s10-Fig. 2, and [0039], last 6 lines) data on data attribute, and

wherein said transmitting unit has means for (10a-Fig. 2) processing ([0045], lines 5-10) the header of a data packet in accordance with a control signal from said routing control unit and means for (10a-Fig. 2) transferring (s9-Fig. 2) the data packet to a neighboring relay node (10b-Fig. 2).

However, Yonekura fails to specifically disclose a function of routing data packets in an application layer of the International Organization for Standardization/Open Systems Interconnection (ISO/OSI) reference model.

Pyhalammi et al. disclose a function of routing data packets in an application layer of the International Organization for Standardization/Open Systems

Interconnection (ISO/OSI) reference model (relays it to the Content/Service Provider 13

through a Layer 7 Switch 35 connection to a data network. refer to [0022], last 6 lines,

and lines 1-end).

Further, Yonekura in view of Pyhalammi et al. fails to specifically disclose that

data packets include a storage address of the application layer.

Kolsky discloses that data include a storage address of the application layer

([0021], lines 5- 7).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to combine Yonekura with Pyhalammi et al. and Kolsky

to obtain the invention as specified, for routing data at different layers and having

clearer description of storage information.

Regarding **claim 2**, Yonekura, Pyhalammi et al. and Kolsky disclose everything

claimed as applied above (see claim 1). In addition, Yonekura discloses the content

relay node according to claim 1, wherein said routing control unit further comprises:

a storage routing table (SRT) (the list, [0068], line 3) expressed by using said

network storage address (NSA) (URL, [0068], line 2) for identifying a storage on a

network ([0068], lines 1-5); and

means for (10a-Fig. 2) determining corresponding to the designated NSA by

using said SRT ([0039], lines 1-4).

Regarding **claim 3**, Yonekura, Pyhalammi et al. and Kolsky disclose everything

claimed as applied above (see claim 1 and 2). In addition, Yonekura discloses the

content relay node according to claim 2, wherein said NSA is expressed by one piece of

or a combination of a plurality of pieces of information (list, [0068], line 3) indicative of

position of a relay node on a network, identification information of a storage distinctive

physically or logically, and information for specifying a data storage location (URL,

[0069], line 2) by designating a directory or a block address in a storage area (list,

[0068], line 3).

Regarding **claim 4**, Yonekura, Pyhalammi et al. and Kolsky disclose everything

claimed as applied above (see claim 1). In addition, Yonekura discloses the content

relay node according to claim 1, wherein the storage has a memory or a memory space

constructed by one Hard Disk Drive (HDD) or a plurality of media (10a-Fig. 2. It is well-

known that a computer has a memory or a memory space constructed by one Hard Disk

Drive).

Regarding **claim 5**, Yonekura, Pyhalammi et al. and Kolsky disclose everything

claimed as applied above (see claim 1). In addition, Yonekura discloses the content

relay node according to claim 1, wherein said switch unit (10a-Fig. 2) has means for

(10a-Fig. 2) sending an input data packet to the data processing unit in order to store

received data into the storage (Fig. 2), and

wherein said storage has means for (10a-Fig. 2) receiving data (Fig. 2) from said

data processing unit (10a-Fig. 2) and storing the received data in the node at least until

transfer of the data to the next relay node is completed (Fig. 2).

Regarding **claim 6**, Yonekura, Pyhalammi et al. and Kolsky disclose everything

claimed as applied above (see claim 1 and 5). In addition, Yonekura discloses the

content relay node according to claim 5, further comprising:

at least one of means for (10a-Fig. 2) storing received data in the form of a packet ([0035], line 3) and means for (10a-Fig. 2) rebuilding (insert, [0048], line 8) data from a plurality of packets and storing ([0048], line 10) the rebuilt data in the node, in said data storing process.

Regarding **claim 7**, Yonekura, Pyhalammi et al. and Kolsky disclose everything claimed as applied above (see claim 1). In addition, Yonekura discloses the content relay node according to claim 1, further comprising:

means for (10a-Fig. 2) reading out data stored in the node and re-transmitting the data in the case where the receiving unit detects a data transmission request (s14 in Fig. 2, and [0039], last 5 lines).

Regarding **claim 8**, Yonekura, Pyhalammi et al. and Kolsky disclose everything claimed as applied above (see claim 1). In addition, Yonekura discloses the content relay node according to claim 1, further comprising:

means for (10a-Fig. 2) determining a route ([0068], last 3 lines) and constructing a storage routing table (SRT) (the list, [0068], line 3) on the basis of data size of a received data flow and available memory space in the next storage for relay at the time of determining correspondence (obtain a relevant content, and to transfer the content after reducing the data amount, [0068], lines 7-8), to be registered in the SRT, between a destination network storage address (NSA) and the next NSA for relay (accordingly, only by specifying an optional Web content in the list, the specified Web content is transmitted to the portable telephone set, [0068], last 3 lines).

Regarding **claim 9**, Yonekura, Pyhalammi et al. and Kolsky disclose everything claimed as applied above (see claim 1). In addition, Yonekura discloses the content relay node according to claim 1, further comprising:

means for (10a-Fig. 2) notifying the other nodes constructing a content routing network of available memory spaces to each other ([0045], lines 1-end).

Regarding **claim 10**, Yonekura, Pyhalammi et al. and Kolsky disclose everything claimed as applied above (see claim 1). In addition, Yonekura discloses the content relay node according to claim 1, wherein said receiving unit has means for (10a-Fig. 2) determining whether data supplied to an input port is to be routed based on a storage address or not ([0045], lines 1-end).

Regarding **claim 11**, Yonekura, Pyhalammi et al. and Kolsky disclose everything claimed as applied above (see claim 1). In addition, Yonekura discloses the content relay node according to claim 1, further comprising:

means for (10a-Fig. 2) using route information obtained by function of a transfer

protocol of a lower layer (IP, [0035], line 7 and 1-end) at the time of determining a

transfer route.

Regarding **claim 12**, Yonekura, Pyhalammi et al. and Kolsky disclose everything

claimed as applied above (see claim 1). In addition, Yonekura discloses the content

relay node according to claim 1, further comprising:

means for (10a-Fig. 2) dividing data into a plurality of packets in an application

layer as necessary and transmitting the packets ([0039], lines 1-end, and [0035], lines

1-4).

Regarding **claim 13**, Yonekura, Pyhalammi et al. and Kolsky disclose everything

claimed as applied above (see claim 1). In addition, Yonekura discloses the content

relay node according to claim 1, wherein said data packet is comprised of a header

([0047], line 9) portion including a data attribute of the application layer and data portion

including the contents of data ([0047], lines 8-11, and [0039], lines 5-6).

Regarding **claim 14**, Yonekura, Pyhalammi et al. and Kolsky disclose everything

claimed as applied above (see claim 1). In addition, Yonekura discloses the content

relay node according to claim 1, wherein said data packet includes in a header portion

([0047], line 9-10) thereof a destination network storage address (NSA) and a source

NSA of the data packet ([0039], last 6 lines).

Regarding **claim 15**, Yonekura, Pyhalammi et al. and Kolsky disclose everything

claimed as applied above (see claim 1). In addition, Yonekura discloses the content

relay node according to claim 1, wherein said data packets include, as a data attribute

included in the header, data identifiers indicating that the data packets are generated

from the same data ([0047], lines 8-11, and [0039], lines 5-6), and packet identifiers

indicative of the order of the data packets as re-building (decompress, [0062], line 2)

information in the case where the data is divided (compressed, [0060], line 5) and the

resultant is transmitted ([0060], last 3 lines).

Regarding **claim 16**, Yonekura, Pyhalammi et al. and Kolsky disclose everything

claimed as applied above (see claim 1).

However, Yonekura fails to specifically disclose that data packet includes priority

information.

Pyhalammi et al. disclose that data packet includes priority information ([0026],

last 6 lines).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to combine Yonekura with Pyhalammi et al. and Kolsky

to obtain the invention as specified, for the specific data packets.

Response to Amendment

4.   Applicant's amendment filed 8/10/2008 has been received and considered.

Response to Arguments

5.   Applicant's arguments filed 8/10/2008 have been fully considered. Upon further

consideration, a new ground(s) of rejection is made.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to WANDA Z. RUSSELL whose telephone number is

(571)270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00

EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Seema Rao can be reached on (571) 271-3174. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Seema S. Rao/
Supervisory Patent Examiner, Art
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